

Abstracts

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OBJECTIVES: To evaluate cost-effectiveness of entecavir (ETV) vs. lamivudine (LVD) in treating CHB in Poland. **METHODS:** A decision tree model was developed to project over a period of 10 years the number of cirrhosis (compensated and decompensated) and hepatocellular carcinoma events based on serum HB viral-DNA levels. Two hypothetical cohorts of CHB patients treated for 2 years were studied: 1) nucleoside-naïve patients treated with ETV (0.5 mg/day) vs. LVD (100 mg/day) and adefovir (ADV) as salvage therapy in case of LVD resistance; and 2) LVD-refractory patients treated with ETV (1 mg/day) vs. ADV (10 mg/day). Effectiveness was measured as quality-adjusted life year (QALY). Efficacy data, the risk predicting models, utility scores and medical costs for CHB disease stages were obtained from published literatures. Life expectancy was estimated using Polish life tables and published literature. A Polish health care payer perspective was considered and a 5% discount rate was used for both costs and outcomes. Sensitivity analyses to treatment patterns, costs and utilities were performed. **RESULTS:** Resistance to treatment with LVD was associated with lower efficacy and increased costs. In nucleoside-naïve HBeAg+ patients, ETV compared with LVD therapy with ADV salvage saved 369,676/373,701 PLN and gained 28/30 QALYs for 100 men/women, respectively. For nucleoside-naïve HBeAg-patients, savings were 185,066/187,564 PLN and QALYs gained 13/15 for 100 men/women, respectively. In LVD-refractory patients, ETV therapy was associated with savings of 424,383/429,007 PLN and QALYs gained of 26/29 for 100 men/women, respectively. Results were robust to sensitivity analyses. **CONCLUSION:** This cost-effectiveness analysis suggests that in the Polish health care system, ETV dominates LVD to treat CHB in nucleoside-naïve and LVD-refractory patients. Due to differences in life expectancy between men and women, cost-effectiveness results are more favorable for women with CHB.

PIN13

COST-EFFECTIVENESS OF LINEZOLID IN GRAM-POSITIVE INFECTIONS: CONSISTENCY OF ECONOMIC ADVANTAGE FROM MULTIPLE HEALTH CARE SYSTEMS

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OBJECTIVES: Linezolid, an oxazolidinone antibiotic, has been shown to be effective in the treatment of complicated skin and soft-tissue infections (cSSTI) and nosocomial pneumonia (NP) including ventilator-associated pneumonia (VAP) caused by methicillin-resistant *Staphylococcus aureus* (MRSA) in hospitalized patients. However, hospital use of linezolid has been limited by high acquisition cost compared with other antibiotics. The objective was to compare the consistency of cost-effectiveness findings of linezolid across different health care systems. **METHODS:** Separate studies were conducted in Brazil, Italy, Germany, Spain, and the US to estimate the cost-effectiveness of linezolid for the treatment of gram-positive infections. In all studies (except US), a decision-analytic model was used to predict the cost-effectiveness of linezolid vs vancomycin or teicoplanin in each country. For the US, resource use data were obtained from a multicenter trial. For all other countries, clinical efficacy data were obtained from multinational clinical trials, cost data were based on published literature and local government sources, and a Delphi panel comprising local experts provided input into health care resource utilization data. **RESULTS:** In all health care systems, linezolid was cost-effective due to its superior clinical cure and survival (in NP). In cSSTI, total treatment costs were less expensive by \$153 (Germany), \$787 (Spain) and \$873 (US) mainly due to reduction in length of stay. In Italy,

treatment costs were similar (linezolid was \$77 more). In VAP, cost per life year saved was \$380 in Spain and cost saving in Brazil. Similarly, cost for life year gained for NP was \$460. **CONCLUSION:** All studies showed that despite higher acquisition cost, linezolid is either cost-saving or cost-effective for hospitalized patients with gram-positive infections across multiple health care systems due to its higher clinical efficacy in terms of cure and survival rates.

PIN14

A CANADIAN COST-EFFECTIVENESS ANALYSIS OF DARUNAVIR FOR HIV INFECTION IN TREATMENT-EXPERIENCED ADULTS

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OBJECTIVES: Darunavir (TMC114; DRV) is a novel protease inhibitor (PI) with demonstrated superior efficacy to currently available PIs for the treatment of HIV infection in treatment-experienced adults who have failed prior antiretroviral therapy. We evaluated the cost-effectiveness (CE), from a Canadian provincial Ministry of Health perspective, of ritonavir-boosted DRV (DRV/r) plus an optimized background regimen (OBR) compared to currently available PIs plus OBR (control). **METHODS:** A Markov model with 3-month cycles was developed to follow patients through 6 possible health states defined by CD4 cell count ranges. Costs (in 2006 Canadian dollars) were assumed to accrue based on estimates of health care services used during each health state. Each health state also had an associated utility value. Cost, utility, and mortality data were estimated from published Canadian sources. Transition probabilities were calculated from clinical trials. Both costs and outcomes were discounted at 5%/year. Two analyses were conducted: 1) incremental cost/additional person with viral load <50 copies/mL at 48 weeks; 2) incremental lifetime cost/quality-adjusted life-year (QALY) gained. Extensive sensitivity and variability (assessing impact of practice patterns, population and model characteristics) analyses were performed. **RESULTS:** DRV/r is associated with a 36% absolute increase in probability of achieving viral load <50 copies/mL at 48 weeks and a gain of 1.27 QALYs over a lifetime. The incremental cost/additional person with viral load <50 copies/mL was \$9897; the incremental cost/QALY gained was \$30,907. Sensitivity and variability analyses showed results were robust. For most of the credible uncertainty ranges, the CE ratio remained less than \$50,000/QALY gained. Variability analyses showed CE ratios ranged \$23,283–\$34,667 depending most heavily on the assumed amount of tipranavir use in the model control arm and enfuvirtide use in the OBR. **CONCLUSION:** When compared to current standard of care, DRV/r plus OBR is cost-effective in treatment-experienced adults who have failed prior antiretroviral therapy.

PIN15

COST EFFECTIVENESS OF MF59 ADJUVANTED INFLUENZA VACCINE IN FRANCE

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BACKGROUND: The cost-effectiveness of routine influenza vaccination in people over 65 is accepted. This study compares the incremental cost-effectiveness of the MF59 adjuvanted vaccine Fludax[®] to non-adjuvanted vaccines in France in situations where the circulating strain matches the strain prepared in the vaccine, and also where there is antigenic drift—where the circulating strain differs slightly from the one included in the vaccine. **METHODS:** A decision analysis model was developed using evi-